

Density:

Review Density Other Nuclear

Objectives

- Review Density Other Nuclear Overview
- Familiarization with data entry and display windows
- Enter a Other Nuclear Density Test Section
- Retrieve/Review Existing Other Nuclear Test Process
- Edit/Delete Other Nuclear Density Test Process

About Other Nuclear Densities

In the process of placing various surfacing material on a job site, RE on-site personnel perform nuclear density tests to ensure that the material meets the state's standards. These tests are performed on the following materials:

- ABC
- Embankment
- CTBC
- Subgrade
- Etc.

The results of these tests are recorded on the M&T 515N form and provided to the RE's office for record keeping.

This portion of the densities module will provide that same functionality in HiCAMS. The RE office personnel will take the test results from the M&T 515N form and enter them into the window provided (see below for screen shot and field descriptions).

Overview

The Other Nuclear Densities module of HiCAMS provides logging of nuclear density test results in a centralized location. This functionality includes, but is not limited to:

- Logging of all nuclear density test results for a project

Authorized Users

The staff members who will have the ability to create, verify and update Other Nuclear Density test results are:

- RE Office Personnel

The staff members who will have the ability to view Other Nuclear Density test results are:

- All staff

Window Descriptions

This is the window used for entering and reviewing Other Nuclear Density data:

Review Density Other Nuclear QC (C200201)

Contract: C200201 Contractor: S. T. WOOTEN CORPORATION Work Order: 8.2341701 Status: Authorized

Material: Field Density - Embankment - Cubic Yards

Results History

Placed Date	Test Sect.	Station From	Station Fraction	Location	% Comp.	Status	NDT Cert.	NDT Name
09/27/2001	3	299+	96		100.0	Meets Specs	336	Finch, Jr., William S
09/27/2001	2	298+	50	TO 301+100	97.1	Meets Specs	336	Finch, Jr., William S
09/27/2001	1	298+	78	RT LN	100.4	Meets Specs	336	Finch, Jr., William S

Comment:

Review Other Nuclear Density (Header and Test Section Tab)

Fields

- **Contract:** The HiCAMS contract number. Entered by user or selected from the Contract Selection window when the selection icon is clicked. REQUIRED.
- **Contractor:** Displays contractor firm name based on the selected contract number. Provided by HiCAMS.
- **Work Order:** The primary work order number for the selected contract number. Provided by HiCAMS.
- **Status:** The status of the contract (ie "Activated"). Provided by HiCAMS.
- **Material:** The type of material on which the testing is being performed. REQUIRED. Valid choices include:
 - *Field Density - Aggregate Base Course*

- *Field Density – Embankment*
- *Field Density - Subgrade.*
- **Run Date:** The date that the tests were performed. REQUIRED.
- **Test:** The test number. REQUIRED.
- **Test Type:** The type of test performed. REQUIRED. These are the available choices:
 - *Long*
 - *Short*
- **Station From/Station Fraction:** The station where the test was performed. (Please note that this is a 2part field with the “+” in the middle.) REQUIRED.
- **Location:** Any additional information associated with the station to more precisely describe the location.
- **% Comp:** The compaction percentage test result. This figure should be between 85% and 105% and it cannot be outside the range of 50%-150%. REQUIRED.

Note: *Test results falling outside the parameters (< 50% or > 150%) are considered invalid and cannot be entered.*

Test results falling between 50% - 85% and 105% - 150% will display a warning message.

- **Status:** The status of the test. The user chooses from one of the following statuses:
 - *Meets Specs*
 - *Does Not Meet Specs – Accepted*
 - *Does Not Meet Specs – Rejected*
 - *Does Not Meet Specs – Pay Adjustment Recommendation*
- **CDT Cert.:** The conventional density technician's certification number. If this number is not known, the user can click on the staff icon and select a Technician by name through the Technician Selection Window. REQUIRED.
- **CDT Name:** Pre-filled when CDT number entered in previous field or selected from search window.
- **Comment:** This is a freeform text field for general comments. It is accessed through the notepad icon next to the comment field at the bottom of the test results tab.

The comment is associated with the test where the cursor is currently located. If the cursor is not on a test, then this field will be empty. The user can add to the existing comment, but not delete or alter it in any way.

This is the window used for reviewing other nuclear density history data:

Review Density Other Nuclear QC (C200201)

Contract: C200201 Contractor: S. T. WOOTEN CORPORATION Work Order: 8.2341701 Status: Authorized

Material: Field Density - Embankment - Cubic Yards

Results History

Action	Action Date	Test Sect.	Status	Who	Comment
Create	11/06/2001 07:51:00	1	Meets Specs	Pace, Randy K	
Create	11/06/2001 07:51:00	2	Meets Specs	Pace, Randy K	
Create	11/06/2001 07:51:00	3	Meets Specs	Pace, Randy K	

☒ Show History For All Tests


Review Other Nuclear Density (History Tab)

Fields

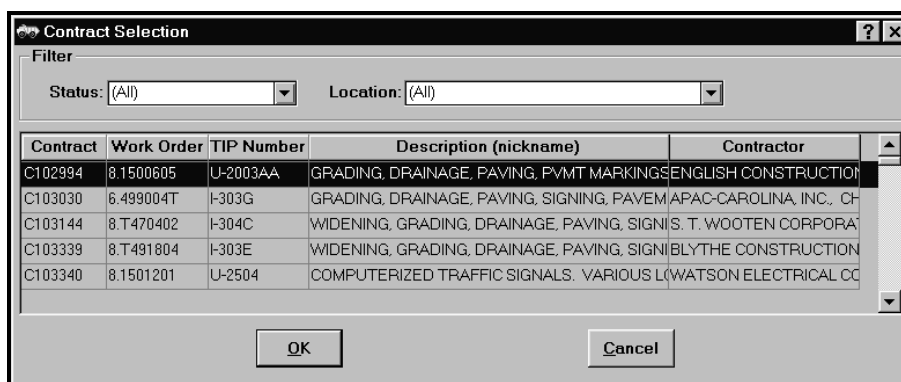
- **Action:** Indicates the action taken that caused the entry into the history:
 - *Comment* – A comment was added to an existing test section
 - *Create* – A new test section was entered
 - *Modify* – Data for an existing test section was modified
 - *Delete* – A test section was deleted
- **Action Date:** This is the date the action was performed in HiCAMS.

- **Test Section:** Displays the original test section number if one or more of the following are changed: test section number, station, or compaction %.
- **Status:** The status of the test.
- **Who:** The full name of the person performing the action.
- **Comment:** The comment associated to the selected history record.

Usage Instructions

- Step 1:** From the menubar, select **Functions® Density® Review Density Other Nuclear**
- Step 2:** The **Review Density Other Nuclear QC** entry window displays.
- Step 3:** Enter the **Contract**. If the contract you entered is not found in HiCAMS, the Contract Selection Window will be opened and you can select a Contract from this window. If you don't know the Contract to begin with, then click on the book button next to the Contract entry field: 

This displays the **Contract Selection** Window:



The screenshot shows the 'Contract Selection' window. It has a 'Filter' section with 'Status' and 'Location' dropdown menus, both set to '(All)'. Below the filter is a table with the following data:


Contract	Work Order	TIP Number	Description (nickname)	Contractor
C102994	8.1500605	U-2003AA	GRADING, DRAINAGE, PAVING, PYMT MARKINGS	ENGLISH CONSTRUCTION
C103030	6.499004T	I-303G	GRADING, DRAINAGE, PAVING, SIGNING, PAVEM	APAC-CAROLINA, INC., CH
C103144	8.T470402	I-304C	WIDENING, GRADING, DRAINAGE, PAVING, SIGNI	S. T. WOOTEN CORPORA
C103339	8.T491804	I-303E	WIDENING, GRADING, DRAINAGE, PAVING, SIGNI	BLYTHE CONSTRUCTION
C103340	8.1501201	U-2504	COMPUTERIZED TRAFFIC SIGNALS. VARIOUS L	WATSON ELECTRICAL CC

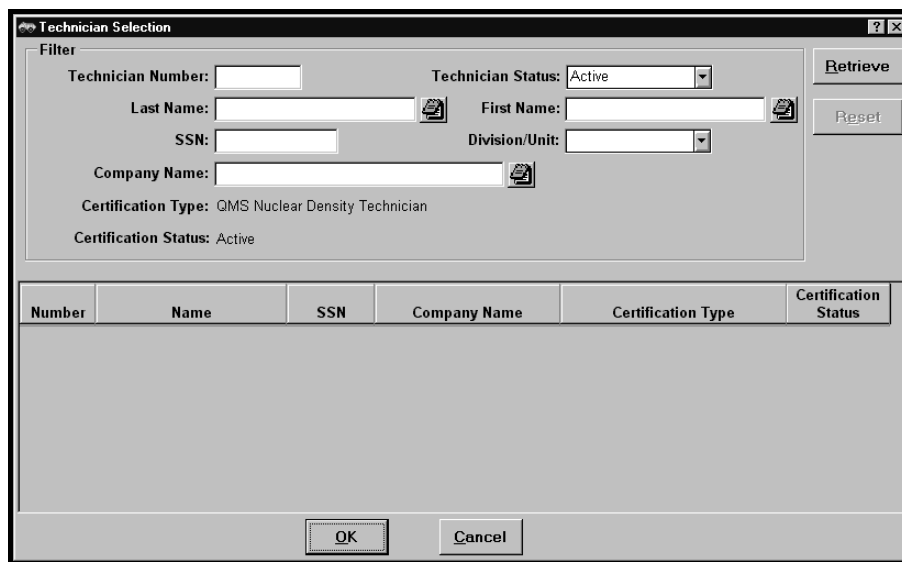
At the bottom of the window are 'OK' and 'Cancel' buttons.

Select the **Density Type** from the Material dropdown list.

- Step 4:** Enter the **Placed Date**.


Note: Once you select or enter a Technician Certification, HiCAMS will retrieve the technician's name and display it in the Nuclear Density Technician field.

- Step 5:** Enter the **Test Section** number.
- Step 6:** Enter station number of the first test taken in the test section in the **Station From/Station Fraction** columns for the test section.
- Step 7:** Enter any other information such as other station numbers, offset, etc. in the **Location** column for the test section
- Step 8:** Enter the test results in the % **Comp.** column.
- Step 9:** Select the test section **Status** from the dropdown menu.
- Step 10:** Enter the technician certification number in the **Nuclear Density Technician Certification** field. If this number is unknown, you can click on the staff icon  to display the “Technician Selection Window” and select the technician from there:



The Technician Selection window is a dialog box with a title bar and standard window controls. It contains a 'Filter' section with several input fields: 'Technician Number', 'Last Name', 'SSN', 'Company Name', 'Technician Status' (a dropdown menu currently set to 'Active'), 'First Name', and 'Division/Unit' (a dropdown menu). There are 'Retrieve' and 'Reset' buttons on the right side of the filter section. Below the filter section, the 'Certification Type' is set to 'QMS Nuclear Density Technician' and 'Certification Status' is set to 'Active'. At the bottom of the window is a table with six columns: 'Number', 'Name', 'SSN', 'Company Name', 'Certification Type', and 'Certification Status'. The table is currently empty. At the very bottom of the window are 'OK' and 'Cancel' buttons.

Number	Name	SSN	Company Name	Certification Type	Certification Status
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- Step 11:** Enter any **Comment** that you may have about the lot. Do this by clicking on the comment icon  or the “Comment” button at the bottom of the window and entering your comment.

Repeat **Steps 411** to enter any additional test sections for this lot.

Step 12: **Save** the data you entered by clicking on the save icon. 

Retrieve/review an existing Other Nuclear Density Test Section

Follow **Steps 1-6** in the section above **Enter an Other Nuclear Density Test Section**

All existing test sections for the selected Contract, Date Placed and Density Type will be displayed in the list on the lower portion of the window.

Edit an existing Other Nuclear Density Test Section

Follow **Steps 1-6** in the section above **Enter an Other Nuclear Density Test**

Step 7: Scroll up or down to find the test section you wish to modify.

Step 8: Place your cursor in the field you wish to modify and make the change.

Step 9: Repeat this for any field on the window.

Step 10: Save the data you entered by clicking on the save icon. 

Delete an existing Other Nuclear Density Test Section

Follow **Steps 1-6** in the section above **Enter an Other Nuclear Density Test Section**

Step 7: Scroll up or down to find the test section you wish to delete.


Step 8: Place your cursor anywhere on the line for the test section.

Review Density Other Conventional - History Comments

These are your deleted and/or modified rows.
Please enter in a comment for each row.

Date Run	Test	Test Type	Station From		Location	Compaction %	Test Status		CDT Technician	
07/17/2001	1		344	+	22end	98.00	Meets	Deleted	13	Copeland

Comment: comment

Step 9: Click on the “Delete” icon. 

Delete other test sections as desired.

Step 10: **Save** the delete by clicking on the save icon. 